REMARKS

1. Claim rejections – 35 U.S.C. 102(e)

Claims 1 – 9, 13 – 14, 17, 19, 26, 29, 43, and 48 were rejected under 35 U.S.C. 102(e) as being anticipated by Wu et al.

Response

Claim 1

Claim 1 has been amended by adding the limitation that the cells are reset in response to a reset signal, wherein resetting the cells returns the cells into a predetermined respective state. As detailed in the specification: "each cell refreshes its dividing operation after being reset", therefore it can be understood by those skilled in the art that there is a predetermined respective state for the cells, and after the cells return into the predetermined state, the cells thus refresh their dividing operations accordingly. Please note that the predetermined state of the cells is independent to the plurality of divisor signals, and therefore reloading the plurality of divisor signals as taught by Wu will not have the function of returning the plurality of cells to a predetermined respective state. As shown in Fig. 9 of the specification, the outputs of two upper flip-flops are set to logic 1 by the reset signal (Rs), where the logic 1 set by the reset signal (Rs) is the respective predetermined state for the two upper flip-flops, and said predetermined state is independent of the divisor signal (Di) state.

The "synchronously reloading" of Wu means "reloads the new divisor (by signal PgLoad) to the input of the dividing stages in a safe-load time period when each dividing stage enters the inactive state" [Col.2, lines 67 ~ Col.3, line 6], where, after the safe-load time period, the dividing stages (i.e. cells) will all act upon the new divisor. Wu only loads the new divisor to the **input** of the dividing stages (Q node of 115 in Fig.1A of Wu), which will not change the state of the dividing stages (cells) (110 in Fig.1A of Wu).

Furthermore, Wu does not disclose changing or returning the dividing stage into a predetermined state that is regardless of the new divisor. Furthermore, "the synchronously reloading" of Wu must proceed during a safe-load time period. As the resetting claimed in Claim 1 happens independently of a reloading operation, the "synchronously resetting" of the present invention could proceed in any time period. Therefore, the function of the reset signal of Claim 1 is patently different from the function of the signal PgLoad of Wu.

Claim 2

Claim 2 is dependent on Claim 1 and should therefore be found allowable if Claim 1 is found allowable.

Claim 3

Claim 3 has been amended to define a further inventive step, wherein after the cells are reset, the divisor signals are reloaded to the cells in response to a reload signal, as supported in specification [Para 62]: "A reload signal is then loaded ..... each cell synchronously loads the corresponding divisor signal ...". This is further supported by Fig. 9 of the specification, which shows the divisor signal (Di) is loaded to the Q node of the flip-flop for reloading the divisor signal to the cell (32) in response to the reload signal (RI). The "reloading in response to a reload signal" of Claim 3 is different from the "resetting and reloading in response to a reset signal" operation of Wu, as the reload operation and reset operation are triggered by two different signals. Furthermore, Claim 3 is dependent on Claim 1, and should therefore be found allowable if Claim 1 is found allowable. Therefore, the applicant believes amended Claim 3 overcomes the prior art rejection.

Claims 4, 6, 7, 12, and 13

Claims 4, 6, 7, 12, and 13 have been amended to comply with currently amended Claim 3 by replacing "step (c)" with "step (d)". As these claims are dependent on

amended Claim 1, and applicant believes Claim 1 has overcome the Examiner's rejections, Claims 4, 6, 7, 12, and 13 should also be found allowable.

Claim 5

Claim 5 is dependent on currently amended Claim 3. As applicant believes Claim 3 has been placed in a position for allowance as per arguments detailed under the response to Claim 3, Claim 5 should also be found allowable.

Claims 8 – 11

Claims 8 – 11 are dependent on Claim 5. As applicant believes Claim 5 has been placed in a position for allowance, claims 8 – 11 should also overcome the prior art rejections.

Claim 14

Claim 14 has been amended to define that the reset signal is sent "from a control circuit". This limitation is fully supported by the specification [Para 40]. This limitation is added to define that the structure of claim 14 is different from that of Wu et al. Wu claims a system wherein a plurality of cells in a divider are, in effect, reset by receiving a signal PgLoad from **a specific cell in the divider**: "an active edge 850 occurs on the enabling signal MinI. As noted above, the MinI signal operates at an eighth of the frequency of the MinF signal, and is thus considered a relatively low-speed signal in the context of the maximum frequency of the divider 900. This relatively low-speed signal, MinI is used as the program load PgLoad, signal to load any new divisor value into the divider 900" [Col. 7, lines 60 – 67]. Furthermore, this quotation demonstrates that the program load signal is **only** utilized for loading a new divisor value into the divider, whereas the reset signal is only for resetting the cells in the divider. Therefore, the program load signal and the reset signal have different functions and are generated in different ways.

Claims 15 – 21

Claims 15 – 21 are dependent on currently amended Claim 14. As applicant believes Claim 14 has been placed in a position for allowance, claims 15 – 21 should also be found allowable.

2. Allowable Subject Matter

Claims 32 – 42 were allowed by the Examiner.

Response

The applicant is grateful to the Examiner for this allowance.

3. Allowable Subject Matter - Claim objections

Claims 10 – 12, 15 – 16, 18, and 20 – 21 were rejected as being dependent upon a rejected base claim but would be allowable if rewritten in independent form.

Response

Claims 10 - 12

Claims 10 – 12 are dependent on Claim 1. As applicant believes Claim 1 has been placed in a position for allowance, claims 10 – 12 should also be found allowable.

Claims 15 – 16, 18, and 20 – 21

Claims 15 – 16, 18, and 20 – 21 are dependent on Claim 14. As applicant believes Claim 14 has been placed in a position for allowance, claims 15 – 16, 18, and 20 – 21 should also be found allowable.

Claims 23 – 25, 27 – 28, 30 – 31, 44 – 47, and 49 – 50 were rejected as being dependent upon a rejected base claim but would be allowable if rewritten in independent form.

Response

Claims 23 - 25

In the previous Office Action response, Claim 22 was cancelled, and claims 23 - 25 were rewritten as independent claims, including all the limitations of Claim 22 respectively. As claims 23 - 25 fulfill the requirements stated by the Examiner in the section 'Allowable Subject Matter', applicant believes claims 23 - 25 should be found allowable.

Claims 27 – 28

In the previous office action response, Claim 26 was amended to be dependent on Claim 25. As Claim 25 was deemed allowable if rewritten in independent form (please see comments above under response to claims 23 – 25) and claims 27 – 28 are now dependent on Claim 25, they should also be found allowable.

Claims 30 – 31

Claims 30 – 31 are also dependent on Claim 25 and should therefore similarly be deemed allowable.

Claims 44 – 47

In the previous Office Action response, Claim 43 was cancelled, and claims 44 - 47 were rewritten as independent claims, including all the limitations of Claim 43 respectively. As claims 44 - 47 fulfill the requirements stated by the Examiner in the section 'Allowable Subject Matter', applicant believes claims 44 - 47 should be found allowable.

Claims 49 – 50

In the previous office action response, Claim 48 was amended to be dependent on

Claim 47. As Claim 47 was deemed allowable if rewritten in independent form (please see comments above under response to claims 44 – 47) and claims 49 – 50 are now dependent on Claim 47, they should be found allowable.

4. New matter

Claim 51

New Claim 51 is dependent on Claim 3. As is supported in specification [Para 62], "a reset signal being logic 1 is employed to synchronously reset all cells 30 of the programmable frequency divider 300", and in specification [Para 69], "after being synchronously reset, each cell 30 renews its operation according to the newly loaded divisor signal", the reloading of the plurality of divisor signals is in response to the reset signal. This is further supported by Fig.9 of the specification, showing the divisor signal (Di) loaded to the Q node of the flip-flop for loading the divisor signal to the cell (32) in response to the reset signal (Rs). As the reset signal also has the function of returning the plurality of cells to a predetermined state as detailed in the response to Claim 1, and furthermore as Claim 51 is dependent on Claim 2, the applicant believes new Claim 51 should be found allowable.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Sincerely yours,

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Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 13 hours behind the Taiwan time, i.e. 9 AM in D.C. = 10 PM in Taiwan.)